

HEAT EXCHANGER ASSEMBLY WITH  
DISSIMILAR METAL CONNECTION CAPABILITY  
ABSTRACT OF THE DISCLOSURE

A heat exchanger assembly designed for use as a fluid cooler formed of a first  
5 metal that includes a dissimilar metal connection allowing the exchanger to be utilized  
and reliably secured to another structure formed of a second metal. The assembly  
provides an easy way to cool engine exhausts, oil or another fluid flowing through the  
exchanger by transferring its heat to a cooling fluid flowing around the exchanger, or  
vice versa. The exchanger of the assembly is formed from a number of heat exchanger  
10 modules . In an embodiment intended particularly to cool diesel engine exhaust for a  
turbocharger, a steel or stainless steel exhaust inlet/outlet cap which is exposed to the  
high temperature exhaust is demountably attached to an all-aluminum heat exchange  
unit connected to the engine cooling system. The high temperature exhaust and the  
engine coolant follow generally parallel vertical paths through the heat exchanger in a  
15 generally U-shaped path that permits a short compact construction. A further  
embodiment utilizes a rubber-like sealant to seal the joints between an assembly of  
modules and header plates which hold the assembly together and provide a base to  
attachment of tanks.